



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 1  
5 Post Office Square, Suite 100  
Boston, MA 02109-3912

May 23, 2012

REDACTED

Re: EPA's evaluation of two rounds of vapor intrusion data collected on your property at  
**REDACTED** (Buildings # 260505-N and 260505-S)

Dear **REDACTED**

EPA has reviewed two rounds of indoor air and subslab soil gas validated data collected from the building on your property at **REDACTED** Woburn, MA, in March and June 2011, and two rounds of validated groundwater data collected near your property in August 2010 and April 2011. Our review indicates that **vapor intrusion does not pose a health threat inside the building**. The term "vapor intrusion" refers to the movement of volatile contaminants from groundwater into a structure.

The results of the sampling show that the compound tetrachloroethylene (also known as perchloroethylene (PCE)) was detected in indoor air and subslab soil gas samples at low levels that do not pose a health concern.

PCE was also found in groundwater samples collected near your property at levels above the federal drinking water maximum contaminant level (MCL) of 5 ug/L. As a result, EPA is requiring continued annual collection of groundwater samples in designated areas near your property so that EPA can continue to evaluate VOC conditions downgradient of/ near the UniFirst Source Area property. Note that the City of Woburn does not currently use this groundwater for drinking water purposes.

Please find attached three figures and one table. Figure 1 illustrates our vapor intrusion conclusions regarding indoor air samples collected within your building. Figure 2 shows the locations where the two rounds of indoor air and subslab soil gas samples were collected within your building in March and June 2011. Figure 3 shows the flagged monitoring well locations which EPA is requiring annual groundwater monitoring. A table is also attached summarizing the two rounds of validated subslab, indoor air, and outdoor air data collected on your property.

Since 1992, the UniFirst Corporation at the UniFirst Source Area property (15 Olympia Avenue) has been operating a groundwater treatment system that has reduced, and will continue to reduce, PCE concentrations in groundwater. In 2012, UniFirst will initiate a

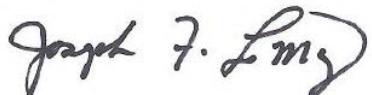
pilot In-Situ Volatilization (ISV) work plan with EPA oversight before designing and implementing a full-scale ISV system to treat VOC contaminated soils, as well as soil gas, (including PCE) on their property.

In addition, if your building stores any products containing volatile compounds such as cleaning products, personal care products, stored solvents/fuels, etc., EPA recommends that you store these products in a separately contained area from the occupied living spaces within the building.

In conclusion, EPA has determined that **vapor intrusion does not pose a health threat inside your building**. Based on groundwater concentrations above the MCL, EPA will require continued annual collection of groundwater samples near your property to evaluate VOC conditions downgradient of/ near the UniFirst Source Area property.

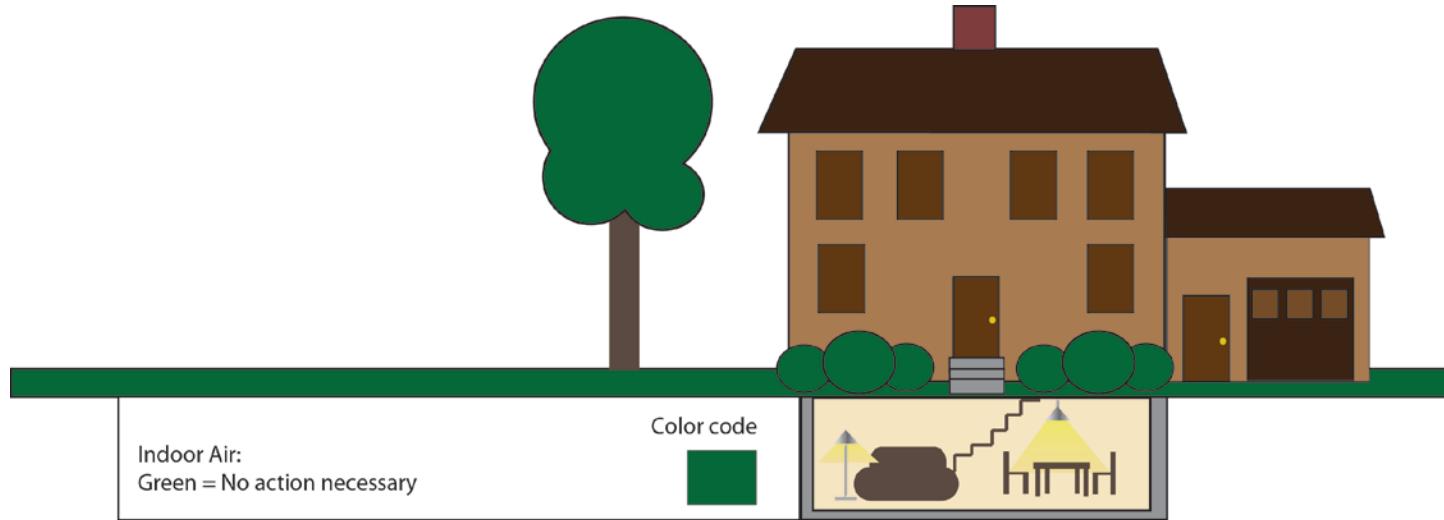
Thank you for your past cooperation and allowing access to your building for the collection of these samples. If you have any questions regarding this letter, or would like to meet and discuss the results, please contact me at (617) 918-1323.

Sincerely,

A handwritten signature in black ink that reads "Joseph F. LeMay". The signature is fluid and cursive, with "Joseph" on the first line, "F." on the second line, and "LeMay" on the third line.

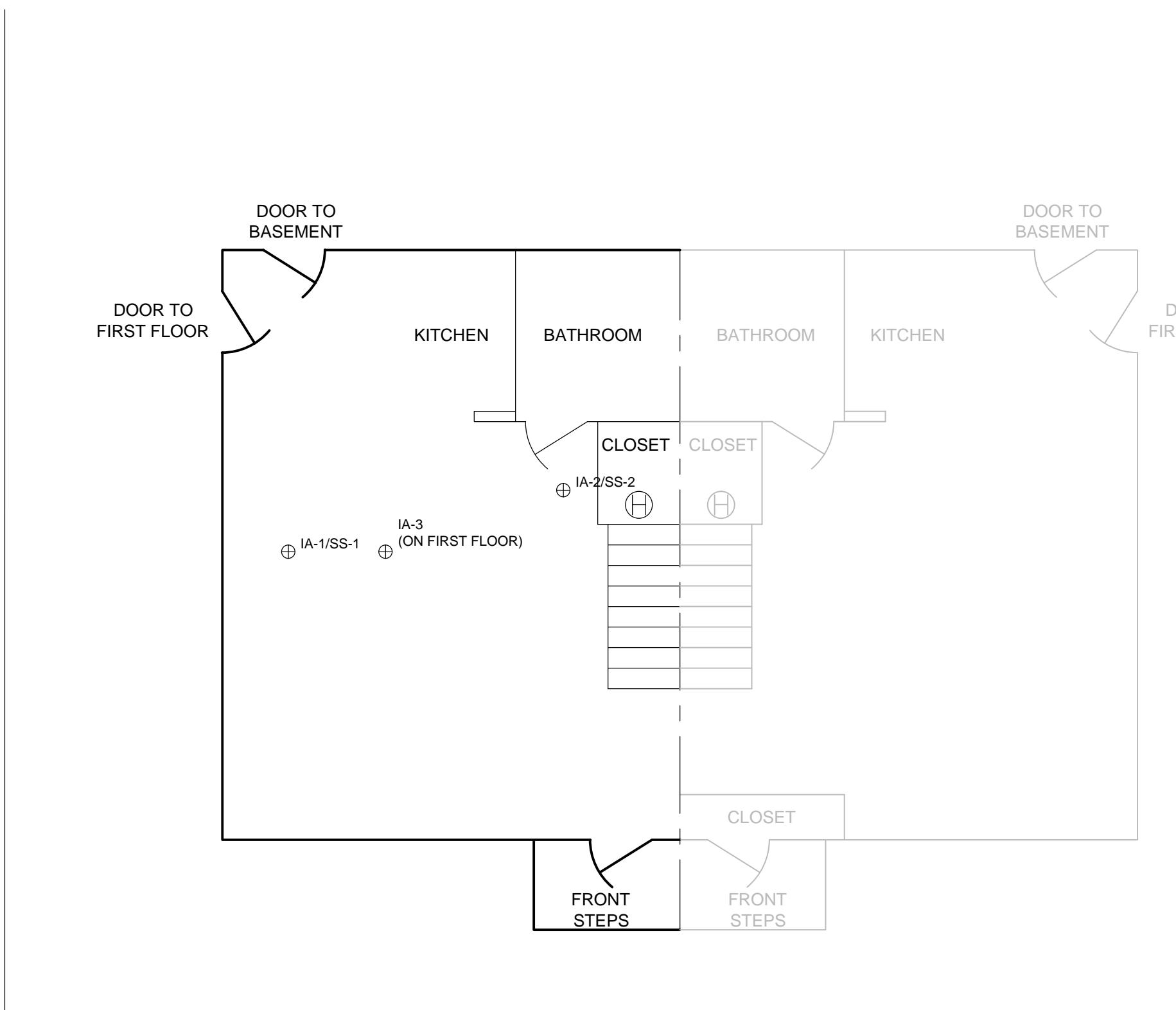
Joseph F. LeMay, P.E.  
Office of Site Remediation and Restoration

**Figure 1 - Residential Property:** REDACTED, Woburn, MA  
(Building # 260505-N and 260505-S)



### Legend

<u>Location</u>	<u>Contaminant</u>	<u>EPA Vapor Intrusion Evaluation</u>	<u>EPA Action</u>
Indoor Air	PCE	Does not pose a potential health threat	No Action Necessary. EPA will continue to monitor wells in the area (wells are labeled on Figure 3)



LEGEND:

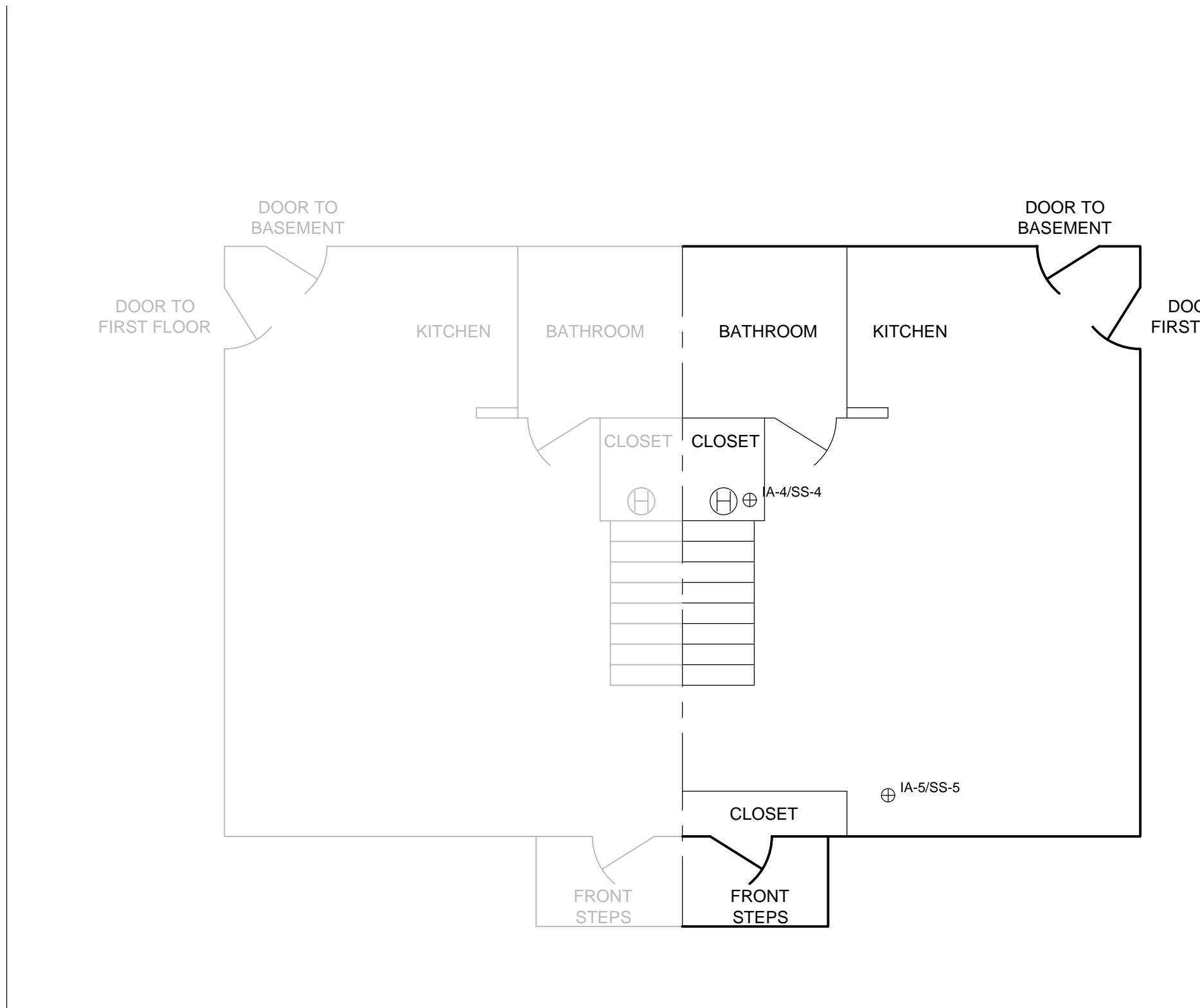
- ⊕ SAMPLING LOCATION
- (H) HOT WATER HEATER

NOTES:

1. ALL LOCATIONS ARE APPROXIMATE.
2. NOT TO SCALE.

UNIFIRST CORPORATION  
WOBURN, MA  
INDOOR AIR QUALITY AND VAPOR INTRUSION  
ASSESSMENT: REPORT OF RESULTS

RESIDENCE SAMPLE LOCATIONS -  
JUNE 2011



**LEGEND:**

- ⊕ SAMPLING LOCATION
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### Figure 3. Annual Monitoring

- Monitoring Well Locations
- Building Footprints
- Parcel Lines

- |                                  |  |  |
|----------------------------------|--|--|
| UC26                             | ● Monitoring Well Locations Identified for Groundwater Annual Monitoring | ■ Building Locations Identified for Indoor Air and Sub Slab Soil Gas Annual Monitoring |
| ■ Superfund Source Area Property |  |  |

0 25 50 100  
Feet  
1 inch = 113 feet

N

Base map: Parcels; MASSGIS

Data Summary Table - Building 260505-N

Compound	Units	IA1	IA2	IA3				IA1	IA2	IA3			
		Basement	Basement	1st Floor	OA1	SS1	SS2	Basement	Basement	1st Floor	OA1	SS1	SS2
		04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	06/17/11	06/17/11	06/17/11	06/17/11	06/17/11	06/17/11
1,1,1-Trichloroethane	ug/m3	0.109 U	0.109 U	0.109 U	0.109 U	0.245	0.213	0.109 U	0.109 U	0.109 U	0.109 U	0.273	0.153
1,1,2-Trichloroethane	ug/m3	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U					
1,1-Dichloroethane	ug/m3	0.0809 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U					
1,1-Dichloroethene	ug/m3	0.0792 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U					
1,2,4-Trimethylbenzene	ug/m3	0.314	0.344	0.403	0.0982 U	0.0982 U	0.0982 U	0.256	0.256	0.177	0.226	0.221	0.098 U
1,2-Dibromoethane	ug/m3	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U					
1,2-Dichloroethane	ug/m3	0.234	0.267	0.376	0.0809 U	0.0809 U	0.0809 U	0.202	0.162	0.461	0.081 U	0.081 U	0.081 U
1,2-Dichloropropane	ug/m3	0.0924 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U					
1,3-Butadiene	ug/m3	0.186	0.225	0.23	0.0442 U	0.0442 U	0.0442 U	0.044 UJ	0.044 UJ	0.044 UJ	0.044 UJ	0.044 UJ	0.044 UJ
1,3-Dichlorobenzene	ug/m3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U					
1,4-Dichlorobenzene	ug/m3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U					
Benzene	ug/m3	0.881	0.964	0.99	0.326	1.32	0.223 U	0.316	0.345	0.278	0.249	0.224 U	0.224 U
Bromodichloromethane	ug/m3	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U					
Bromoform	ug/m3	0.206 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U					
Carbon Tetrachloride	ug/m3	0.333	0.333	0.346	0.352	0.126 U	0.126 U	0.421	0.465	0.459	0.472	0.145	0.126 U
Chlorobenzene	ug/m3	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U					
Chloroform	ug/m3	0.244	0.254	0.254	0.0976 U	0.205	0.693	0.234	0.2	0.137	0.107	0.22	0.166
cis-1,2-Dichloroethene	ug/m3	0.0792 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U					
Ethylbenzene	ug/m3	0.555	0.612	0.625	0.087	0.59	0.0868 U	0.478	0.456	0.195	0.13	0.087 U	0.087 U
Isopropylbenzene	ug/m3	2.46 U	2.46 U	2.46 U	2.46 U	2.46 U	2.46 U	2.46 U					
Methylene Chloride	ug/m3	1.74 U	2.17 U	1.78 U	3.35 U	2.76 U	3.02 U	1.74 U					
Methyl tert-butyl ether	ug/m3	0.072 UJ	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U					
Naphthalene	ug/m3	0.262 UJ	0.262 UJ	0.262 U	0.262 U	0.262 U	0.262 U	0.162 J	0.189 J	0.136 J	0.304 J	0.262 UJ	0.262 UJ
Tetrachloroethene	ug/m3	0.366	0.366	0.291	0.136 U	53.2	154	0.136 U	0.136 U	0.136 U	0.136 U	73.9	145
Toluene	ug/m3	2.65	2.8	2.95	0.561	6.4	0.188 U	2.32	1.86	1.2	1.27	0.686 U	0.188 U
trans-1,2-Dichloroethene	ug/m3	0.0792 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U					
trans-1,3-Dichloropropene	ug/m3	0.0907 UJ	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U					
Trichloroethene	ug/m3	0.107 U	0.107 U	0.107 U	0.107 U	0.161	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U
Vinyl Chloride	ug/m3	0.0511 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U					
Xylenes (total)	ug/m3	1.58	1.81	1.94	0.26 U	1.8 J	0.26 U	0.96	0.947	0.617	0.491	0.386	0.261 U

Notes:

IA = Indoor Air sample

OA = Ambient Air (Outdoor Air) sample

SS = Subslab Soil gas sample

[0.109U] - Duplicate sample results presented in brackets

U - Compound not detected

J - Estimated value

µg/m3 - micrograms per cubic meter

Data Summary Table - Building 260505-S

<b>Compound</b>	<b>Units</b>	<b>IA4</b>	<b>IA5</b>	<b>OA1</b>	<b>SS4</b>	<b>SS5</b>	<b>IA4</b>	<b>IA5</b>	<b>OA</b>	<b>SS4</b>	<b>SS5</b>
		<b>04/22/11</b>	<b>04/22/11</b>	<b>04/22/11</b>	<b>04/22/11</b>	<b>04/22/11</b>	<b>04/22/11</b>	<b>06/17/11</b>	<b>06/17/11</b>	<b>06/17/11</b>	<b>06/17/11</b>
1,1,1-Trichloroethane	ug/m3	0.109 U	0.109 U [0.109 U]	0.109 U	0.109 U [0.109 U]	0.109 U	0.109 U	0.109 U	0.109 U	0.153 [0.147]	0.109 U
1,1,2-Trichloroethane	ug/m3	0.109 U	0.109 U [0.109 U]	0.109 U	0.109 U [0.109 U]	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U [0.109U]	0.109 U
1,1-Dichloroethane	ug/m3	0.0809 U	0.0809 U [0.0809 U]	0.0809 U	0.0809 U [0.0809 U]	0.0809 U	0.081 U	0.081 U	0.081 U	0.081 U [0.081U]	0.081 U
1,1-Dichloroethene	ug/m3	0.0792 U	0.0792 U [0.0792 U]	0.0792 U	0.0792 U [0.0792 U]	0.0792 U	0.079 U	0.079 U	0.079 U	0.079 U [0.079U]	0.079 U
1,2,4-Trimethylbenzene	ug/m3	0.201	0.167 [0.157]	0.0982 U	0.0982 U [0.0982 U]	0.0982 U	0.565	0.575	0.226	0.359 [0.128]	0.162
1,2-Dibromoethane	ug/m3	0.154 U	0.154 U [0.154 U]	0.154 U	0.154 U [0.154 U]	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U [0.154U]	0.154 U
1,2-Dichloroethane	ug/m3	0.125	0.113 [0.125]	0.0809 U	0.0809 U [0.0809 U]	0.0809 U	0.716	0.712	0.081 U	0.081 U [0.081U]	0.081 U
1,2-Dichloropropane	ug/m3	0.0924 U	0.0924 U [0.0924 U]	0.0924 U	0.0924 U [0.0924 U]	0.0924 U	0.097	0.102	0.092 U	0.092 U [0.092U]	0.092 U
1,3-Butadiene	ug/m3	0.148	0.115 [0.124]	0.0442 U	0.0442 U [0.0442 U]	0.0442 U	0.124 J	0.137 J	0.044 UJ	0.044 UJ [0.044UJ]	0.044 UJ
1,3-Dichlorobenzene	ug/m3	0.12 U	0.12 U [0.12 U]	0.12 U	0.12 U [0.12 U]	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U [0.12U]	0.12 U
1,4-Dichlorobenzene	ug/m3	0.12 U	0.12 U [0.12 U]	0.12 U	0.12 U [0.12 U]	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U [0.12U]	0.12 U
Benzene	ug/m3	0.485	0.46 [0.469]	0.326	0.223 U [0.223 U]	0.223 U	0.585	0.543	0.249	0.224 U [0.224U]	0.224 U
Bromodichloromethane	ug/m3	0.134 U	0.134 U [0.134 U]	0.134 U	0.134 U [0.134 U]	0.134 U	0.161	0.154	0.134 U	0.134 U [0.134U]	0.134 U
Bromoform	ug/m3	0.206 U	0.206 U [0.206 U]	0.206 U	0.206 U [0.206 U]	0.206 U	0.207 U	0.207 U	0.207 U	0.207 U [0.207U]	0.207 U
Carbon Tetrachloride	ug/m3	0.358	0.339 [0.339]	0.352	0.17 [0.163]	0.327	0.491	0.484	0.472	0.157 [0.151]	0.327
Chlorobenzene	ug/m3	0.092 U	0.092 U [0.092 U]	0.092 U	0.092 U [0.092 U]	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U [0.092U]	0.092 U
Chloroform	ug/m3	1.18	0.629 [0.663]	0.0976 U	0.122 [0.112]	0.18	1.97	2	0.107	0.469 [0.171]	0.298
cis-1,2-Dichloroethene	ug/m3	0.0792 U	0.0792 U [0.0792 U]	0.0792 U	0.0792 U [0.0792 U]	0.0792 U	0.079 U	0.079 U	0.079 U	0.079 U [0.079U]	0.079 U
Ethylbenzene	ug/m3	0.317	0.295 [0.304]	0.087	0.0868 U [0.0868 U]	0.0868 U	1.8	1.84	0.13	0.087 U [0.087U]	0.087 U
Isopropylbenzene	ug/m3	2.46 U	2.46 U [2.46 U]	2.46 U	2.46 U [2.46 U]	2.46 U	2.46 U	2.46 U	2.46 U	2.46 U [2.46U]	2.46 U
Methylene Chloride	ug/m3	1.74 U	1.74 U [1.74 U]	1.74 U	1.74 U [1.74 U]	1.74 U	1.74 U	1.74 U	2.76 U	1.74 U [1.74U]	1.74 U
Methyl tert-butyl ether	ug/m3	0.072 UJ	0.072 UJ [0.072 UJ]	0.072 UJ	0.072 UJ [0.072 UJ]	0.072 UJ	0.072 U	0.072 U	0.072 U	0.072 U [0.072U]	0.072 U
Naphthalene	ug/m3	0.183 UJ	0.262 UJ [0.131 UJ]	0.262 U	0.262 U [0.262 U]	0.262 U	0.351 J	0.383 J	0.304 J	0.419 J [0.262UJ]	0.262 UJ
Tetrachloroethene	ug/m3	1.9	1.96 [2.09]	0.136 U	12 [11.3]	0.352	1.82	2.34	0.136 U	13.6 [14]	1.71
Toluene	ug/m3	3.1	2.96 [2.97]	0.561	0.188 U [0.233]	0.188 U	15.5	16.7	1.27	0.584 U [0.316U]	0.441 U
trans-1,2-Dichloroethene	ug/m3	0.0792 U	0.0792 U [0.0792 U]	0.0792 U	0.0792 U [0.0792 U]	0.0792 U	0.079 U	0.079 U	0.079 U	0.079 U [0.079U]	0.079 U
trans-1,3-Dichloropropene	ug/m3	0.0907 UJ	0.0907 U [0.0907 UJ]	0.0907 UJ	0.0907 UJ [0.0907 U]	0.0907 UJ	0.091 U	0.091 U	0.091 U	0.091 U [0.091U]	0.091 U
Trichloroethene	ug/m3	0.107 U	0.107 U [0.107 U]	0.107 U	0.107 U [0.107 U]	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U [0.107U]	0.107 U
Vinyl Chloride	ug/m3	0.0511 U	0.0511 U [0.0511 U]	0.0511 U	0.0511 U [0.0511 U]	0.0511 U	0.051 U	0.051 U	0.051 U	0.051 U [0.051U]	0.051 U
Xylenes (total)	ug/m3	0.698	0.681 [0.672]	0.26 U	0.26 U [0.26 U]	0.26 U	3.7	3.71	0.491	0.261 U [0.261U]	0.261 U

## Notes:

IA = Indoor Air sample

OA = Ambient Air (Outdoor Air) sample

SS = Subslab Soil gas sample

[0.109U] - Duplicate sample results presented in brackets

U - Compound not detected

J - Estimated value

μg/m3 - micrograms per cubic meter